SONY

NTSC

Video Editing System

FXE-120

Versatile VTR Interface and In/Out Capability

Three VTR Control

The FXE-120 provides three switchable RS-422 and/or RS-232C ports for control of two players and one recorder VTR. Basic VTR functions such as PLAY, STOP, STILL, FF, REW and REC are controlled through these interfaces. Variable speed control is also possible for VTRs equipped with the Dynamic Tracking™ function.

LANC[*1] Interface for Player VTR*

The FXE-120 can be interfaced with home-use LANC VTRs in order to expand the versatility of player VTRs and camcorders*[2].

Time Code Based Editing

In addition to CTL signals, SMPTE/EBU standard longitudinal time code (LTC) and 8mm time code can be used to specify locations on source and master tapes. When you use the home-use LANC VTRs with RC Time code*[3] capabilities, the FXE-120 can control them based on RC Time Code.

Two Bus Switcher

The FXE-120 is composed of two busses, the A-bus and B-bus. Each bus provides P1, P2, AUX inputs and Background color.

Multiple Video Format Input/Output

Since the FXE-120 accepts and outputs both composite and Y/C video signals, system integration with the combination of various VTR formats such as S-VHS, Hi8™, and Betacam SP™ is possible.

GPI Input/Output

For the control of external devices, such as character generator, GPI (T1 and T2 edit pulse) outputs are provided. GPI inputs are also used controlling the FXE-120 from external editing devices.

Synchronized Operation

The FXE-120 features four black burst outputs to distribute an internally generated signal to synchronize connected devices. Fully synchronized system operation is possible without the need of an external signal generator.

Audio Mixing

Audio-follow-video editing can easily be realized as the FXE-120 features audio mixing capabilities. Two inputs are assigned for each player VTR input and a channel output for the recorder VTR. Two inputs for AUX and a MIC input are also featured for flexible audio mixing of background music and narration. All of the audio input levels can be adjusted separately. As for audio outputs, two channels of Program outputs and a channel for monitor output are provided.

High Quality Digital Effect Processor

Digital Processing for High Quality Video

4-fsc sampling of input video signals, 8-bit quantizing, and 4:1:1 digital processing of the signal processing assures the FXE-120 of stable, high quality video.

Built-in Frame Synchronizers

The FXE-120 provides a frame synchronizer in each bus, which automatically synchronizes the INPUT video signals. With this feature, there is no need to worry about connecting VTRs without a Time Base Corrector.

Noise Reduction and Digital Vertical Enhancer

Chrominance Noise Reduction (CNR) and Luminance Noise Reduction (YNR) circuits maximize picture quality and a Digital vertical enhancer maintains sharp picture.

Color Correction

In order to change the tone of an image, color correction is available. Various color settings are possible by moving the color correction joystick. It is also possible to store settings in the memory for perfect replication at a later time.

Wipe Patterns

135 kinds of wipe pattern, including picture scroll and slides, are programmed in the FXE-120. The patterns can be accessed with just a press of the corresponding button or retrieving the pattern number using the ten key buttons. Borders and soft edges can be added to these wipe patterns and the border colors are selectable.

Mix Effect/Fade Effects

A variety of MIX Effects such as Mosaic Mix, Black & White Mix, Posterization Mix and Picture in Picture are provided. Fade to Black and Fade to White effects can also be performed with just the touch of a button.

Input Effects

Attractive visual effects such as Mosaic, Posterization, Pixel Trail, Multi-picture, Mono-tone, Strobe and Zoom are provided. Picture freeze can be performed in frame or field mode.

Flexible Effects Settings

As all of the special effects can be set separately to the video sources of each bus, wipes or dissolves of the sources with digital effects can be executed. It is also possible to combine multiple effects to create stunning images, such as wiping the Multi-picture with Posterization and dissolving color corrected picture with Mosaic effects.

Superimpose

The FXE-120 features a chromakeyer and luminance keyer to superimpose characters, figures, or video sources onto the background scene. Clip and gain levels of key signals can be adjusted to give clean and sharp key edges.

Today's communications require practical tools which provide faster and clearer delivery of information. In such an environment, the tremendous advantages of the video medium have made it the optimum choice in many communication applications. With this in mind, Sony now introduces the FXE-120, an A/B roll editing system designed for quicker, easier video editing, best suited for today's professional audio/visual communications.

The FXE-120 is a VTR controller which controls the basic VTR functions, a special effect generator which cuts, mixes, wipes the video sources and an audio mixer which cross-fades the audio sources are all integrated in single compact body. The FXE-120 eliminates the need to configure multiple devices for professional video/audio editing.

With Hi8™, S-VHS, or Betacam SP™, an ideal editing system for professional environment can be easily configured at a cost you have never imagined

Picture Transition

Manual transition using the fader lever, as well as automatic transition is possible. Duration can be set in the range from 0 to 999 frames. Pause and reverse of the transition can also be executed.

Color Background

Background colors are separately featured in each of the A and B bus. A total of 25 colors are provided. These color backgrounds can be effectively used for impressive image creation.

Digital Sound Processing

The FXE-120 can provide two different kinds of quasi surround sound in order to enhance the digital sound effects. Monaural audio can be split to L&R channels to create quasi stereo sound. The FXE-120 digital sound processing system also offers keytone change by digitally changing sound frequencies of the audio input.

Title Key

Posterization

Mosaic

Scroll

Multi-Picture (Wipe)

Multi-Wipe

Heart Wipe

Star Wipe (User Wipe)

Pixel Trail

Useful Features in Editing

Editing Modes

Editing can be performed in Assemble or Insert (V, A1, A2) mode. The 1st EDIT mode enables you to record sufficient length of time code, CTL, and black burst signals on a blank tape before starting Assemble editing.

Split Edits

The FXE-120 features a Split Edit function which allows you to set the audio/video In-points separately. This feature enables you to perform impressive scene transitions, such as bringing in the audio source before a visual transition.

99 Editing Memory

Editing data, including special effects settings, for 99 events can be stored in the memory system of the FXE-120.

Saving/Loading of the EDL Data

EDL data can be saved and loaded onto the floppy disk via the provided RS-232C port which interfaces to an IBM/PC compatible personal computer. This feature allows you to review or modify the edit data at any time.

Learn function

The FXE-120 incorporates the Learn function to learn the pinch-on delay timing for the VTRs with RS-422/232C, the response timing and the search speed of LANC VTRs. Thus, the FXE-120 offers flexible control of LANC VTRs in the variable speed search mode.

Time Code Insertion

Time code insertion is possible on a recorded tape without time code.

Simple Configuration

Effective Two Machine Editing

Taking advantage of the freeze function in the FXE-120, two machine editing with effect transitions is realized by freezing the recorder OUT point picture. Also, by selecting the same video source in both A and B bus, wipe or mix In/Out of the digital effects without picture transition is possible. This "Self A Roll" function is another feature which allows effective two machine video editing.

Multiple Device Integration

An editing controller, video switcher, audio mixer and a digital effects generator are integrated in the FXE-120. By simply connecting the three VTRs, you have a professional video and audio editing system.

Easy Operation

User Friendly Control Panel

The keys and buttons are logically grouped by function and are color coded for quick operator identification, allowing editing with a minimum of key-strokes. And because the INPUT EFFECT keyboard can be used as 10 numeric key buttons, it is possible to input numeric information very easily for editing.

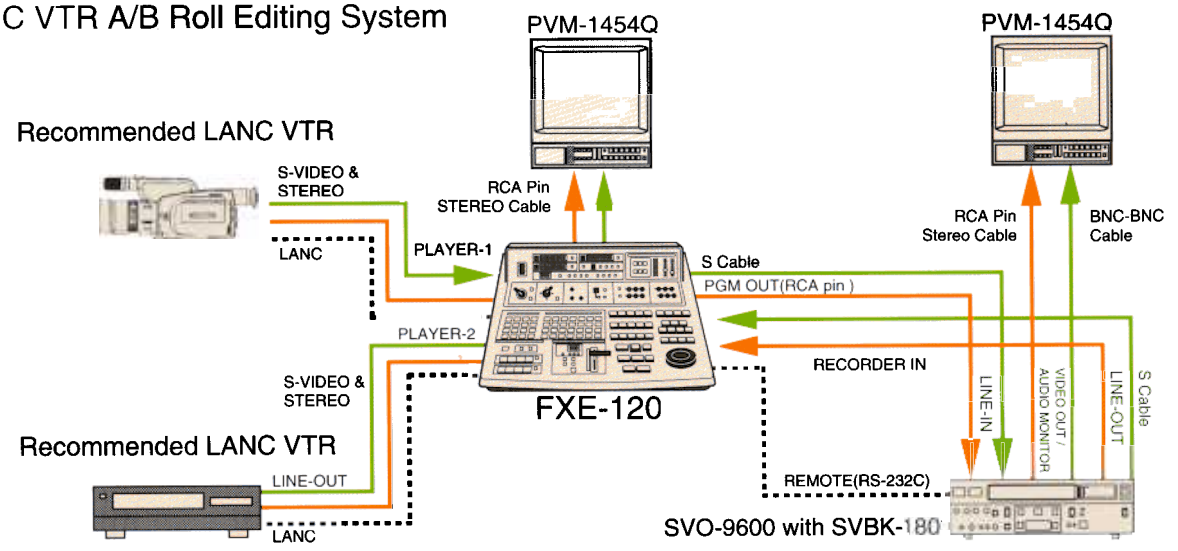
One Dial, One Monitor Operation

To speed the location of images to be edited and simplify the editing process, the FXE-120 is equipped with a push-to-change style jog/shuttle dial. For effective and simple monitoring, the sources are easily selected with just a touch of the button on the control panel. As it is not necessary to use multiple monitors, the system connections are quite simple. Various editing data such as the edit mode and time code address of each VTR can be monitored on the same screen.

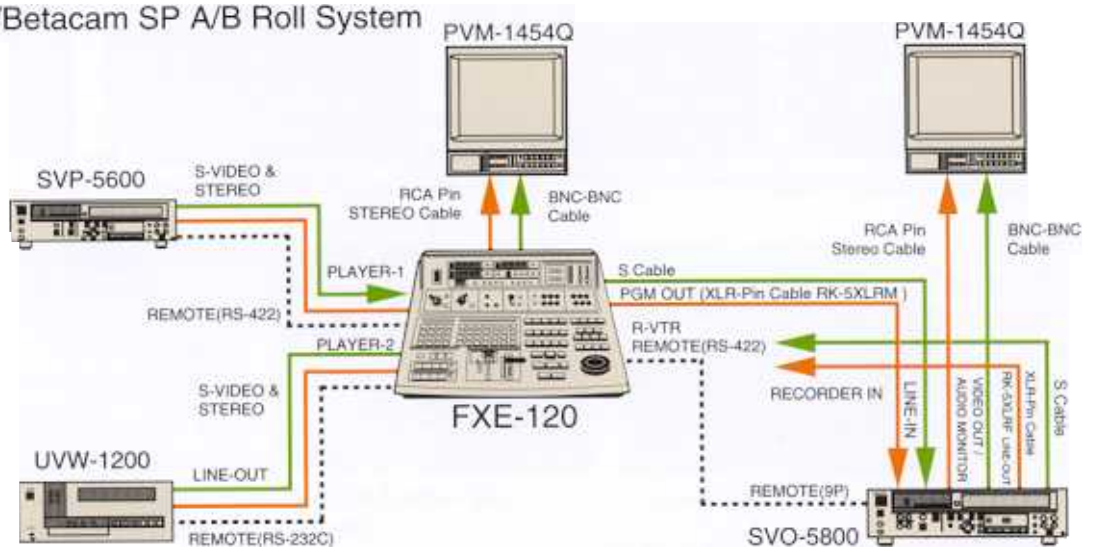
System Examples

Video
Audio
Remote

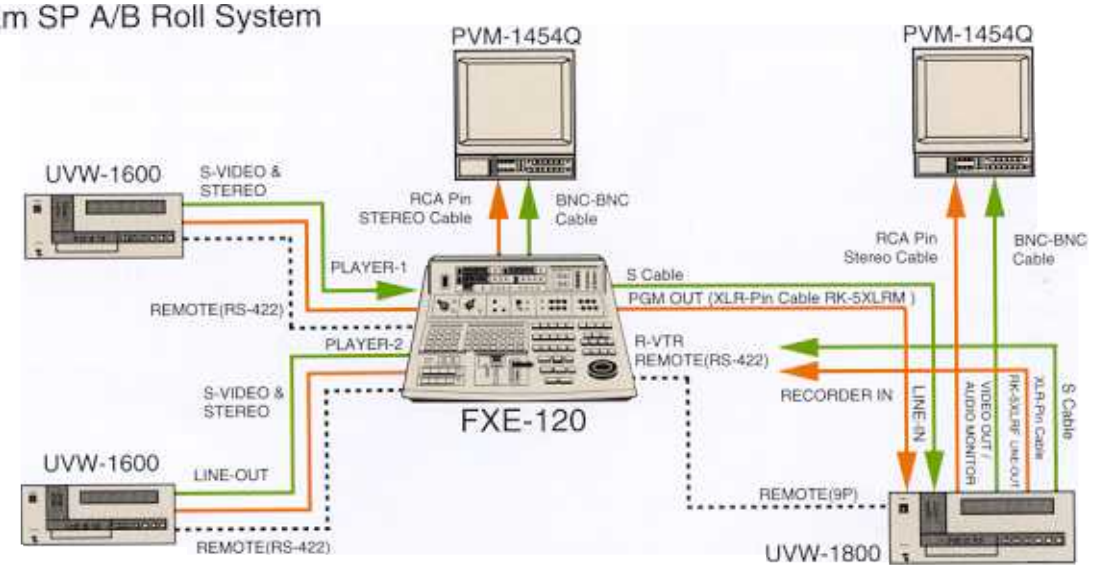
LANC VTR A/B Roll Editing System



S-VHS/Betacam SP A/B Roll System



Betacam SP A/B Roll System



Specifications

General

Power Requirements	AC 120V ±10%, 50/60Hz ±5%
Power Consumption	Maximum 57W
Operating Temperature	5 °C to 40 °C (41 °F to 104 °F)
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Dimensions	424(W) X 138.5(H) X 437.5 (D) mm (16 3/4 X 5 1/2 X 17 1/4 inches)
Mass	Approximately 7.3kg (16 lb 1 oz)

Systems

Time Counter	Internal time counter (X3)
Time Count Display Range	(hours:minutes:seconds:frames) Time code: 00:00:00:00 to 23:59:59:29 CTL: ±9:59:59:29 Full edit mode
Editing Mode	Assemble Edit: Video, Audio 1/2 Insert Edit: Video, Audio 1/2 First edit, Time code insert Split edit (audio split offset from video IN point) Dynamic Motion Control (DMC)
Eject Type	MIX, WIPE, SYNC-ROLL, CUT, MANUAL 1st Edit, Audio Split Edit, DMC Control
Edit Reference	CTL, LTC, SMPTE/EBU Time code, 8mm Time code, RC Time Code, DV Time Code
Edit Accuracy	RS-422: ±0 frame with TC, ±1 frame with CTL RS-232C: ±1 frame with TC LANC: ±5 frame with RC Time Code
Transition Time Range	0 to 999 (unit:frames)
Pinch-on Delay	Simultaneous measurement of pinch-on delay for up to three VCRs connected to RS-422/ RS-232C/LANCconnectors
EDL Memory Capacity	99 edits
Split Edit Reference	Audio or Video input

Control

VTR Interface	RS-422: 9-pin RS-232C: D-sub 9-pin LANC: stereo mini-mini jack
Controllable VTR	1 recorder, up to 2 players
GPI Interface	GPI IN (BNC) GPI OUT (BNC)X 2
EDL Interface	EDL IN/OUT (D-sub 9-pin)

Video

Video Inputs

Composite	Player 1, 2, AUX, RECORDER BNC X 4 unbalanced PLAYER1, PLAYER 2, AUX1, RECORDER Video : 1.0 Vp-p, 75Ω Sync : 0.286 Vp-p Burst: 0.286 Vp-p
S-Video	4 pin x 4 unbalanced Mini DIN4-pin X 2, PGM1, PGM2 Y: 1.0 Vp-p, 75Ω, sync negative C: 0.286 Vp-p, 75Ω Burst Sync: 0.286 Vp-p

Video Outputs

Composite	PGM 1, 2, MONITOR BNC X 3, Unbalanced Video: 1.0 Vp-p, 75 Ω, sync negative Sync: 0.286 Vp-p,
S-Video	Burst: 0.286 Vp-p 4-pin X 2 Unbalanced,
Black Burst Out	Sync: 0.286 Vp-p, Burst: 0.286 Vp-p BNC X 4, Unbalanced Sync: 0.286 Vp-p, Burst : 0.286 Vp-p

Audio

Audio Inputs(stereo)

AUDIO L/R INPUT (phono jack),
(2 channels X 5)
PLAYER 1 MAIN (2), SUB (2)
PLAYER 2 MAIN (2), SUB (2)
RECORDER (2)
AUX 1 (2)
AUX 2 (2)
Input Impedance: selectable with 600Ω terminal switch
Input level:
-7.5 dBs*4 (input impedance 47kΩ or above, 600Ω switch OFF)
+4 dBs (input impedance 600Ω, 600Ω switch ON)

Mic Input (monaural)

Phone x 1, unbalanced
Input level: -60 dBs,
Input Impedance: more than 4.3 kΩ or above

Audio Outputs(stereo)

AUDIO L/R OUTPUT (phono jack) X 6
PGM 1 (2), PGM 2 (2), MONITOR (2)
Output level: -7.5 dB/+4.0 dB selectable
Output Impedance:
47kΩ (-7.5 dBs/+4.0dBs)

Signal Processing

Sampling Rate	Y: 910fH (fH=15.734kHz) R-Y/B-Y: 1/4 X 910 fH
Quantization	Y/R-Y/B-Y: 8-bit
Frequency Response	0 to 5 MHz + 1 dB/-3dB
Signal to Noise Ratio	More than 53dB
Y/C Delay	Less than 50ns (Composite)

Supplied Accessories

AC power cord (1),
Replacement label (1 set),
Instruction manual (1),
User's guide (1),
LANC cord (2)

Optional Accessories

RCC-5/10/30G	RS-422 remote cable
SMF-3036C	RS-232C remote cable (9-pin to 25-pin)

Recommended LANC VTRs*1

Camcorders:	CCD-VX3, CCD-TR700, CCD-TR500, CCD-V801, CCD-TR3000, DCR-VX700, DCR-VX1000
VTR:	EV-S7000, EV-S5000, EVO-540, EVO-550H, CVD-500

*1 LANC stands for Local Application Control bus system. It is bi-directional wired command protocol designed by Sony to control video products. It is used mainly for the Sony home-use video products for wired remote control applications. The LANC port is labeled as LANC, or CONTROL-L, or REMOTE. We recommend that you use LANC players that can read RC time code or DV time code as listed in the above Recommended LANC VTRs.

*2 Some of the functions of the player connected through the LANC interface of the FXE-120 are limited depending on the capabilities of the connected LANC players.

*3 RC Time Code : Rewritable Consumer Time Code designed for home-use 8 mm VTRs.

*4 0dBs = 0.775 Vr.m.s

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V-10602
MK3046OB9603P1-010.5

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